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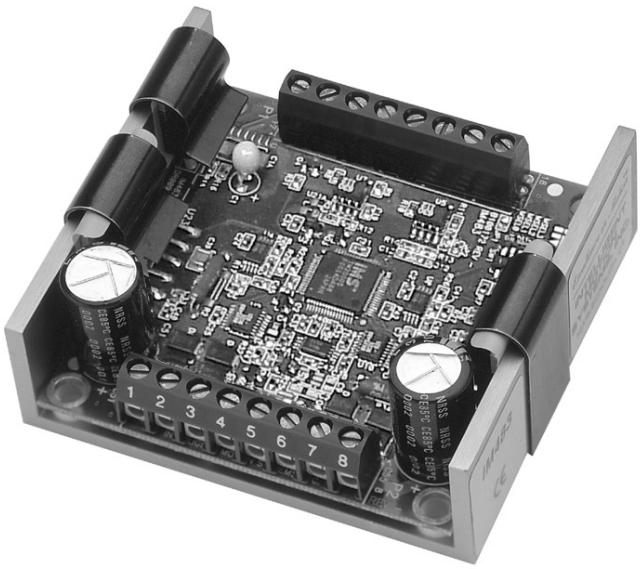
IM483 CE

HIGH PERFORMANCE MICROSTEPPING DRIVER



FEATURES

- Low Cost
- Extremely Small
  (2.7 x 3.0 x 1.2 inches)
  (70 x 69 x 31 mm)
- Single Supply
- High Input Voltage (+48 V)
- High Output Current
  (3 Amps RMS, 4 Amps Peak)
- Advanced Surface Mount and ASIC Technology
- No Minimum Inductance
- Up to 10 MHz Step Clock Rate
- Opto-Isolated Inputs
- Fault Output
- Short Circuit and Over Temperature Protection
- Up to 51,200 Steps/Rev
- Microstep Resolutions Can Be Changed On-The-Fly without Loss of Motor Position
- 20 kHz Chopping Rate
- Automatically Switches Between Slow and Fast Decay for Unmatched Performance
- 14 Selectable Resolutions Both in Decimal and Binary
- Adjustable Automatic Current Reduction
- At Full Step Output
- Optional On-board Indexer and Encoder Feedback

DESCRIPTION

The IM483 is a high performance, low cost microstepping driver that incorporates advanced surface mount and ASIC technology. The IM483 is small, easy to interface and use, yet powerful enough to handle the most demanding applications.

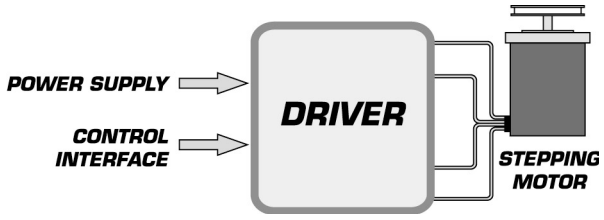
The IM483 has 14 different resolutions (both in binary and decimal) built into the driver. These resolutions can be changed at any time. There is no need to reset the driver.

This feature allows the user to rapidly move long distances, yet precisely position the motor at the end of travel without the expense of high performance controllers.

The development of proprietary circuits has minimized ripple current while maintaining a 20 kHz chopping rate. This prevents additional motor heating that is common with drivers requiring higher chopping rates. Now low inductance stepper motors can be used to improve high speed performance and system efficiency. The IM483 also comes with an optional on-board indexer to provide design engineers with versatility and power unmatched in today's industry.

The IM483 is priced lower to provide customers with affordable state-of-the-art technology for that competitive edge needed in today's market.

BLOCK DIAGRAM



ELECTRICAL SPECIFICATIONS

Input Voltage* ..... +12 to +48 Volts
Drive Current Per Phase ..... 0.4 to 4 Amps Peak (Max 3 Amps RMS)
Isolated Inputs ..... Step Clock, Direction, Enable & Reset
Step Frequency (Max) ..... 10 MHz (1.8 MHz with –NR Option)
Steps per Revolution – 1.8° Motor 400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 25000, 25600, 50000, 51200
Protection ..... Thermal and All Way Short Circuit

*Includes Motor Back EMF, Power Supply Ripple and High Line Conditions. Recommended Power Supply: ISP200-4.

PIN ASSIGNMENTS

CONNECTOR P1 – 8 Pin		CONNECTOR P2 – 8 Pin	
PIN	FUNCTION	PIN	FUNCTION
1	No Connect	1	Reduction Adjust
2	Step Clock	2	Current Adjust
3	Direction	3	Ground
4	Opto Supply	4	+V (+12 to +48 VDC)
5	Enable	5	Phase /B
6	Reset	6	Phase B
7	Fault	7	Phase /A
8	On Full Step	8	Phase A

CONNECTOR P1 – 34 Pin			
PIN	FUNCTION	PIN	FUNCTION
3	Resolution Select 3	21	Step Clock Out
4	Step Clock In	22	Direction Out
6	Direction In	23	Resolution Select 0
8	Opto Supply	24	Resolution Select 2
10	Enable	25	Resolution Select 1
12	Reset	26	On Full Step
14	Fault	27	Ground
16	On Full Step	Pins not shown are NO CONNECT.	

TEMPERATURE

Storage ..... –40 to +125° C
Case (Max)** ..... 0 to +70° C

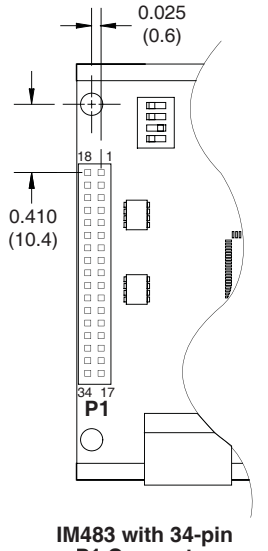
**External heat sink may be required to maintain case temperature.

ORDER INFORMATION

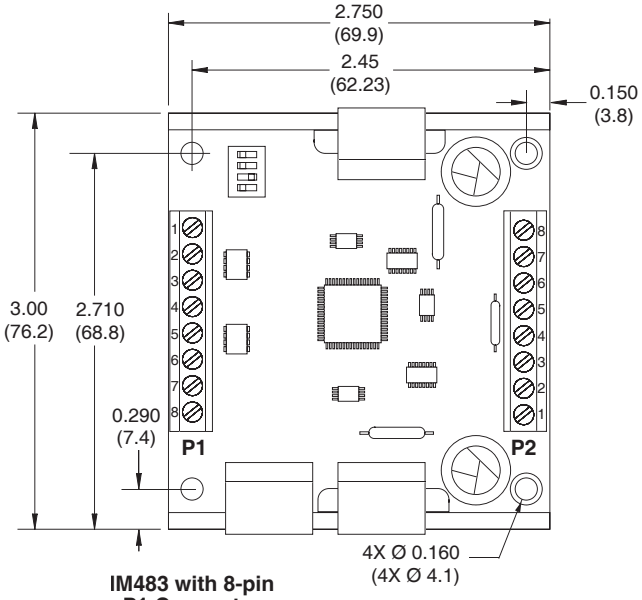
Name	Part Number
Microstepping Driver	IM483
Noise Reduction Inputs (1.8 MHz)	add –NR to basic part #
Heat Sink	H–4X
Thermal Pad	TN–48
8 Position 0.045" sq Pin P2 Connector with 8 Position 0.025" sq Pin P1 Connector	–8P2
34 Position 0.025" sq Pin P1 Connector	–34P1
Plug Type Terminal Strip for P1 and P2 Connectors	–PLG
Mating Connectors for the –PLG Option	PLG–R1/–R2
Side Mounting Clip Set	U3-CLP

MECHANICAL SPECIFICATIONS

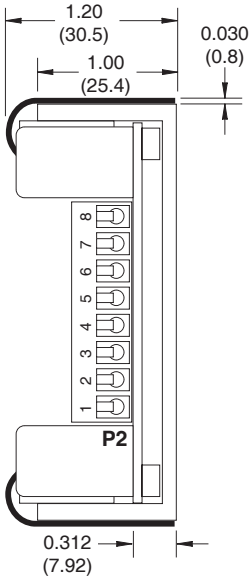
Dimensions in Inches (mm)



IM483 with 34-pin P1 Connector



IM483 with 8-pin P1 Connector



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